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(54) Title: **SYSTEM AND METHOD FOR XENOBIOTIC CELL AND TISSUE CULTURE SUPPORTED BY SURROGATE  
AVIAN VASCULAR CIRCULATION**

(57) Abstract: The invention relates to the use of *ex ovo* embryonic eggs to support the growth and/or culturing of biological materi-  
als. In various embodiments, the biological materials may be, for example, organs or fragments of organs, tissues or tissue sections,  
cell suspensions or physical three-dimensional matrices containing embedded live cells. The use of *ex ovo* embryonic eggs may be  
particularly advantageous in providing vasculature to xenografts in the relative absence of immunological concerns, as the embryo  
is immune-incompetent. The invention additionally provides methods for addressing potential xenograft rejection by a transplant  
recipient, by including an inducible apoptotic gene in the animal from which the egg is obtained and thereafter inducing the gene to  
eliminate avian cells that develop in the cultured biological material.



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